

# CAL and PLANTATION NEWS

## EUROPE MUST BUY FROM AMERICA

Refiners Find Conditions Easier With More Abundant Supply, Stocks Larger

Sales of raw sugar at New York during the week ending November 9 were 5500 tons full duty, 9000 bags Porto Rico and 100,000 bags Cuban. Willett & Gray report receipts at the United States Atlantic ports, 50,959 tons; meltings, 42,000 tons; total stock, 50,999 tons, against 51,040 tons last week and 150,814 tons last year.

Estimated receipts to the United States from Cuba and Porto Rico, 26,000 tons; Hawaii, 10,000 tons; Philippine Islands, 15,000 tons; various, 15,000 tons; total, 75,000 tons, against total 90,000 tons last year.

**Stocks Improve**  
Stocks in the United States and Cuba together of 179,016 tons, against 200,844 tons last week and 305,920 tons last year, a decrease of 126,904 tons from last year.

In part, Willett & Gray report sales at 6.52c, which total 130,000 bags, include sugars of various countries, some free of duty, some at a concession of duty as Cubas, and some that pay the full duty as assessed by the tariff. The Americas was the principal buyer.

Louisiana sugars about unchanged, with lowest sales at 6 cents for 96 degree refining grades, with but little business reported.

The statistical position, as far as refiners are concerned, shows signs of improvement, as the receipts this week are larger than meltings, being 55,999 tons against 42,000 tons required for meltings. Total stocks are 59,999 tons.

**Heavy Rains in Cuba**  
There appeared at Cuban shipping ports during the month of October 12,638 tons, against 13,668 tons same month last year. The exports of the week were of 1.7 size—35,175 tons to the United States Atlantic ports and 2,214 tons to Europe. Stocks are reduced to 111,504 tons, against 145,374 tons at this time last year.

Heavy rains continue generally throughout the island. If a start earlier than usual is to be made in grinding the new crop, it will be necessary for the heavy rains to stop soon and cooler weather set in, in order to ripen the cane and increase the sugar content. Late cable advices to us state that abundant rains have occurred in Santa Clara province, with fine weather in other places.

**Philippine Islands**  
Special cable from Manila reports exports of 14,000 tons during October to the United States Atlantic ports, 1000 tons to San Francisco and 7000 tons to eastern countries, a total of 22,000 tons. The shipments this year have been large, a total of 129,000 tons being exported to the United States and 315,000 tons to all countries, against 84,000 tons and 190,000 tons the corresponding figures for last year.

Exports from January 1 to October 31, 1916, to the United Kingdom were 68,440 tons, against 3250 tons during the same period last year. The large shipments would indicate that stocks in the Philippines are running very low at this time, the end of the season just and just before the start of new crop making. Nineteen thousand tons are now afloat for United States eastern ports, against 27,000 tons at this time last year.

Special cable just received from Manila reports the 1915-16 crop has out-turned, 315,000 tons. This crop had previously been estimated at 300,000 tons. The 1916-17 crop just starting is estimated at only 250,000 tons, including 65,000 tons centrifugal sugars.

**British Refiners Make Money**  
A Glasgow paper announces that a big extension scheme is in contemplation by one of the Greenock sugar refining companies. This is a natural outcome of the prosperity which has been the lot of British refiners since the war broke out, and evidently confidence is felt that this prosperity in the British sugar refining business will continue after the war.

Weight and sugar content of the beets now being harvested in Germany, Austria-Hungary and Belgium give results considerably below those of a year ago.

Sugar cards are expected to be introduced in Sweden on November 1, 1916, as they have been recommended by the national food supply commission and will apply to the whole country.

Sugar has been scarce in Denmark, with growers limiting the quantity to be purchased for some time, but the matter is now being investigated, and some arrangement will be made to alleviate the existing difficulties.

In Russia preparations are being made for the importation of American and Java sugars. Such importations will be expensive and can only be made where high-priced sugars can be paid for. The importations will be made by the ministry of trade in connection with the Petrograd bureau committee on a systemized basis. About 15,000 prisoners of war are to be allotted to the sugar industry to work the factories and refineries.

Capt. Jim Churchill, former New York police officer under "Bill" Devoy, now Broadway restaurateur, declares he has never been inside any of the rival lobster palaces in the bright light district.

## WORLD'S SUGAR CROP, 1916-17

FIRST OFFICIAL ESTIMATES BY "WILLET & GRAY" AND "WILLET'S SUGAR BULLETIN" COMPARED, AND REARRANGED, RECLASSIFIED AND SUMMARIZED BY A. M. NOWELL.

U. S. Case	U. S. Beet	Willet & Gray, Oct. 19, 1916.	Willet's Sugar Bulletin, Oct. 20, 1916.	Harvesting Period, Oct.-Jan. July-Jan.	Cane Sugar	Beet Sugar
					11,485,000	12,171,000
					6,019,000	6,538,000
					17,435,000	18,709,000
<b>MAINTLAND</b>						
Hawaii		875,000	885,000	Nov.-July		
Porto Rico		425,000	450,000	Oct.-Jan.		
Philippines		300,000	325,000	July-Jan.		
		1,600,000	1,660,000			
<b>ISLANDS</b>						
		1,300,000	1,450,000			
<b>TOTAL U. S. (FREE)</b>						
		2,900,000	3,110,000			
<b>CUBA</b>						
		3,400,000	3,500,000	Dec.-June		
<b>TOTAL PREFERRED</b>						
		5,700,000	5,840,000			
<b>WEST INDIES</b>						
British West Indies		181,000	217,000	Jan.-July		
French West Indies		80,000	90,000			
Dutch West Indies		15,000	15,000			
San Domingo		140,000	148,000			
		397,000	470,000			
<b>MEXICO AND CENTRAL AMERICA</b>						
British Honduras		25,000	4,000	Oct.-Feb.		
French Honduras		50,000	100,000	Oct.-Feb.		
		75,000	104,000	Jan.-June		
<b>INDEPENDENT SOUTH AMERICA</b>						
Demerara (British Guiana)		130,000	120,000	Oct.-Dec.		
Surinam (Dutch Guiana)		15,000	15,000	Oct.-Jan.		
<b>SOUTH AMERICA</b>						
		770,000	830,000			
<b>AUSTRALIA AND POLYNESIA</b>						
		310,000	300,000	June-Nov.		
<b>FORMOSA AND JAPAN</b>						
		430,000	430,000	Nov.-June		
<b>AFRICA</b>						
Madagascar (Portuguese)		8,000	8,000	May-Oct.		
Angola (Portuguese)		20,000	20,000	Aug.-Jan.		
Mozambique (Portuguese)		40,000	40,000	Aug.-Jan.		
Bechuanaland (British)		40,000	40,000	Aug.-Jan.		
British India		110,000	110,000	Jan.-June		
Egypt (British)		100,000	100,000			
		525,000	555,000			
<b>ASIA</b>						
China (French)		250,000	250,000	Dec.-May		
India (British)		2,400,000	2,500,000	May-Nov.		
Java (Dutch)		1,500,000	1,500,000			
		3,960,000	4,110,000			
<b>CANADA (BEET)</b>						
		14,000	16,000	Oct.-Dec.		
<b>GERMANY</b>						
		1,600,000	1,600,000			
Austria		1,000,000	1,110,000			
Belgium		100,000	110,000			
France		4,000	4,000			
Denmark		20,000	20,000			
		2,724,000	3,034,000			
<b>CENTRAL ALLIES CONTROL</b>						
Russia		1,400,000	1,810,000			
Poland		175,000	175,000			
Italy		160,000	160,000			
Holland		275,000	280,000			
Denmark		115,000	115,000			
Spain		110,000	110,000			
Sweden		39,500	39,500			
		2,420,000	2,640,000			
<b>OTHER EUROPE</b>						
		5,150,000	5,690,000	Sept.-Jan.		
<b>TOTAL EUROPE BEET</b>						
		5,150,000	5,690,000			
<b>SPAIN (CANE)</b>						
		6,000	8,000	Dec.-June		
<b>TOTAL EUROPE</b>						
		5,156,000	5,698,000			
<b>TOTAL NON-PREFERRED</b>						
		11,637,000	12,864,000			
<b>GRAND TOTAL CROP</b>						
		17,435,000	18,709,000			

### Concrete Ditch Lining

Engineering Record gives details of construction and cost of work on the Okanagan irrigation project in Washington, where a good many miles of ditches have been concreted. It was found that seepage losses were reduced from fifty-one to fifteen per cent of the total water received at the head gates. "No trouble has been experienced on account of contraction and expansion injuring the lining even when the water is rotated and the canal is dry half the time during the summer."

### Dynamite Experiments

F. W. Waite reports results of experiments with dynamite used in preparing for cane on the Island of Antigua, British West Indies. In a bulletin of the imperial department of agriculture (West Indies). Experiments on heavy calcareous loam soil in growing plant and matted cane using two ounces dynamite cartridges inserted 2.5 feet deep gave results which are not comparable with the results obtained in the ratoon crop and a decrease in the plant crop.

### Three Promotions

G. H. Halden for many years chemist at Makaweli has been appointed mill superintendent at Honokaa in place of Alfred Krafft. Mr. Krafft has been appointed chief chemist of Oahu Sugar Company vice P. A. G. Messchaert who has retired from active plantation work. It is reported that Mr. Messchaert may become an employee of the Hawaiian Sugar Planters' Association to carry on certain investigations of general interest to the industry in connection with manufacturing problems.

### Puunene Grinds Today

Hawaiian Commercial & Sugar Company's mill, the largest factory in Hawaii, starts work on its big 1917 crop today.

## CAPITALIZED COST OF IRRIGATION PROJECTS

That the capitalized cost of irrigation structures is being given more consideration than the first cost, is stated by S. T. Harding in a recent number of Engineer and Contractor. His report deals with the factors involved in a choice between concrete and wood.

It is concluded "that no general conclusion can be drawn as to the most economical type of construction. For any particular project where the construction costs can be estimated and the other factors, such as financial conditions of the constructing organization, rate of interest, certainty as to type of structure desired, and permanence of its location can be given proper weight, a decision can be made. Under usual conditions concrete will be the preferable material if the capitalized cost of service alone is considered. The other factors are, however, more usually such as to include the choice toward wood for first construction, except for the larger and more important structures. That the capitalized cost is being given more consideration and that many systems are reaching a condition where replacements and betterments can be made on a more permanent basis is evidenced by the increasing use of concrete in irrigation structures."

According to the Journal of Biological Chemistry there is no limit to the assimilation of glucose by healthy adults. A. E. Taylor and Florence Hulston have recently published results of investigations on the food value of pure glucose. Perfect digestion and complete assimilation was the result where normal men received from 200 to 500 grams (six to sixteen ounces) of glucose a day and a half to three hours after a light breakfast. Analysis of the blood and excreta were made to determine the extent of the utilization.

### ACCIDENTS WILL HAPPEN.

It may be impossible to prevent an accident, but it is not impossible to be prepared for it. Chamberlain's Pain Balm is not beyond anyone's purse, and with a bottle of this liniment you are prepared for most anything. For sale by all dealers. Benson, Smith & Co., Ltd., agents for Hawaii.

## NEXT CUBAN CROP ABOUT LIKE LAST

New York Correspondent Confirms Menocal's Re-election As President

Under date of November 19, the New York correspondent of one of the sugar houses writes as follows: "There has been but little change in this market since our last report. Buyers are not disposed to climb for what they need, while sellers appear to be determined to hold their sugars until something happens to change the outlook. Yesterday the American and other refiners took about 130,000 bags (Cuba, Porto Rico, Peru and St. Cruz) all at the equivalent of 5 1/2 cents c. & f. for Cuba."

"There are today a few small lots of nearby and prompt Cuba available at the same price, but buyers are rather inclined to wait. Operators come into the market sporadically and take an odd lot which might otherwise be sacrificed. Their purpose was indicated in our last. The continued rains in Cuba, while helping along the tonnage, are retarding the ripening of the cane, so much so that if cool weather does not set in soon the start of the crop will be far into December."

### Cuba Same As Us

"The reported election of Zayas as president of Cuba seems to have been premature, like similar reports nearer home, and it is now believed that Menocal has been re-elected, which, it is thought, will work for still greater stability in the island."

"Referring again to the new Cuba crop, a statement made by Guina-Meyer of Havana and just given out by a local brokerage house confirms our remarks about the retardation of the harvest due to rains, and further hazards the opinion that the new crop will not greatly exceed the one taken off this year."

### Kauai Tassels Light

Alexander & Baldwin have received reports from Makaweli that the cane is tasseling very lightly this year. This indicates irregularity in ripening.

## BUSINESS BETTER ON LOCAL STOCK EXCHANGE

Oil Stocks and Copper Advance and Sugar Is Stronger

Stocks were a little more active yesterday, total sales amounting to 1635 shares, 500 of which were Pioneer, 525 Oahu and 530 Olan. Hawaiian Commercial gained a half, Olan three-eighths and McBryde a quarter; Hawaii Consolidated Ry. "A" sold at previous level; Pioneer lost a quarter and Olan a half.

There was one bond sale, \$2500 Hawaii Consolidated Railway 5s, without change. Singapore rubber quotations are 62.42 cents per pound instead of 62.40 as stated yesterday.

### WEATHER REPORTS HAD INFLUENCE ON PRICES

Sales during the week ending November 18 were very moderate, according to New York advices to Alexander & Baldwin. Late Cane was offered at 5.40 and full duty 6.35, but buyers were only interested in Cuba at 5.37. Reports of damage to Louisiana cane and Western beets by frost are believed to have been exaggerated. The loss will be slight if good weather continues. A "norther" is blowing in Cuba with high winds, heavy rains and cooler weather. It is probable the mills can not start grinding before the middle of November.

To dream that you are at a banquet signifies that you should avoid pleasures which may cost you dear.

## COSTS PER TON OF CUBAN SUGAR

Very Cheap Cane Balances Inefficiency In The Mill Work

In the July and August issues of the International Sugar Journal (1916) appear some very interesting data on the Cuban sugar industry, based on a detailed report by the department of agriculture, commerce and labor, supplemented by several other official publications. As the writer has had personal experience in the field in connection with a score of factories, his digest from which the following notes are taken, is of exceptional interest; many other points besides these here noted, are touched upon, and the original article is well worth a careful perusal.

Control of the factory: As a rule, this is divided between the chief engineer (jefe maquinista) and the factory superintendent (jefe de fabricacion) the former has charge of the plant—the boilers, mills and so forth, while the latter works up the juice delivered to him into sugar and its by-products.

That the working-out of such a plant, with divided responsibilities, is rarely satisfactory, is evident enough from the low efficiency attained at many, if not at most of the factories.

### Efficiency of Cuban Factories

CROP OF 1913-14.

Sucrose in Sugars, per 100 Sucrose in Cane	73.3	74.4
Sucrose in Juice, per 100 Sucrose in Juice	91.3	89.0
Sucrose in Juice, per 100 Sucrose in Cane	82.0	83.9
60 test Sugar per 100 Cane	10.69	10.98
Sugar in Cane	13.29	14.17
Produce	14.44	15.00
Finest No. 1	13.29	13.71
Havana	14.44	14.44
Matanzas	14.08	14.08
Santa Clara	13.10	13.10
Camaguey	13.10	13.10
Oriente	13.10	13.10
Average	13.71	14.17

Contrary to expectation, the average result of fifteen of the larger factories presents an average result only slightly better than the grand average given above.

This appears clearly from the following table:

Crops in Tons of	Sugar Per Cent	90 Sugar Per Cent	Sucrose in Sugar, In Cane
15,000	14.50	11.60	76.8
30,000	14.08	11.16	76.0
45,000	13.71	10.98	76.0
60,000	13.94	11.35	78.6
75,000	13.70	10.86	76.1
90,000	13.60	11.41	80.6
105,000	13.76	11.12	77.6
120,000	12.79	10.25	79.4
135,000	14.15	11.23	77.5
150,000	15.00	10.23	65.5
165,000	15.40	10.50	65.7
180,000	13.97	10.38	79.7
195,000	14.50	10.57	79.0
210,000	13.20	11.48	82.8
225,000	13.67	10.37	75.9
Average	13.67	10.37	75.5

### Size vs. Efficiency

The writer observes that: "This very low efficiency in Cuban mills is the result of the argument that a great capacity and a large output will produce greater profits than more efficient working and a smaller output. It may also be due to a lack of appreciation of the results indicated as possible from a study of a complete technical control. The connection between efficiency and capacity is very complicated and includes many variables; given a factory as a constant, the economic limit of production may vary with the price of sugar, the price paid for cane, the percentage yield on cane, the overhead charge, etc." The writer proceeds to indicate this variation.

**Cost of Production**  
Purchase of cane: Cane may be bought at from four and a half to seven and a half per cent, computed as sugar at the current market price in Cuba. This refers to cane cut, hauled and loaded on railway cars, the purchaser paying transportation to factory. Thus, with cane at five per cent and sugar at three cents, the cost of a ton of cane is \$3.00 f. o. b. cane.

Cultivation expenses in western Cuba: Cost of a ton of cane f. o. b. railway cars in western Cuba, \$2.15 per ton. Price of land: In eastern Cuba this ranges from about \$5 per acre to under special conditions—\$25 per acre. Cost of establishment: The total cost of cane ready to cut from new land will be 1.10 to 1.25 and \$50 per acre. At least ten crops are expected before to planting is necessary.

## REFRIGERATION CONTROLS PESTS

Mediterranean Fruit-fly Experiments of Back and Pemberton Worth Money To Hawaii

Few realize the comprehensive character of the work done here by Dr. E. A. Back and his assistant, C. E. Pemberton, in their experiments on the life-history and control of the Mediterranean fruit-fly. Hence, while not immediately concerning the sugar industry, a resume of some of Doctor Back's findings are not out of place in these columns.

Some of these results are published in a recent number of the Journal of